

DEPARTMENT OF THE ARMY  
U.S. ARMY MEDICAL DEPARTMENT ACTIVITY  
FORT HUACHUCA, ARIZONA 85613-7040

MEDDAC MEMORANDUM  
NO. 750-4

18 March 2004

Maintenance of Supplies and Equipment  
OXYGEN PURITY CONTROL PROGRAM

	Para	Page
History-----	1	1
Purpose-----	2	1
Applicability-----	3	1
References-----	4	1
Type and Location-----	5	1
Responsibilities-----	6	2

1. HISTORY: This issue publishes a revision of this publication.

2. PURPOSE: This memorandum establishes policy, prescribes procedures and assigns responsibilities regarding the storage and administration of oxygen use for medical purposes.

3. APPLICABILITY: This memorandum applies to Fort Huachuca MEDDAC and DENTAC Clinics involved in the storage and administration of oxygen.

4. REFERENCES:

4.1 AR 700-68, Storage and Handling of Compressed Gases and Gas Cylinders.

4.2 Comprehensive Accreditation Manual for Ambulatory Care (CAMAC), current edition.

4.3 MEDCOM/OTSG Reg 385-2, U.S. Army Medical Command Safety Program

5. TYPE AND LOCATION OF OXYGEN MONITORS:

5.1 There are two types of oxygen monitors used within this activity.

5.1.1 Pressure Monitor (both over pressure and under pressure) (normal pressure 50PSI).

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\*This memorandum supersedes MEDDAC Memo 750-4, dated 29 Jan 01.

5.1.2 Quality Monitor (normal quality readings are 99 to 100 percent).

5.2 Location of pressure monitors.

5.2.1 Ambulatory Surgical Procedure Unit (ASPU)

5.2.2 Post Anesthesia Care Unit (PACU)

5.2.3 Endoscopy Room.

5.2.4 Clinical Engineering Branch (CEB)

5.2.5 The oxygen quality monitor is located in the Clinical Engineering Branch (CEB) with a remote alarm located in the Family Care Clinic (FCC).

5.3 The following areas will require an alternate oxygen supply in case an emergency renders the bulk delivery system inoperative.

5.3.1 Endoscopy Room.

5.3.2 Operating Room.

5.4 When an oxygen pressure alarm sounds in any area during normal duty hours, the Clinical Engineering Branch will be notified. If the alarm sounds after normal duty hours, the AOD will call the Clinical Engineering technician on-call.

## 6. RESPONSIBILITIES:

6.1. Commander will:

6.1.2 Appoint, in writing, an Oxygen Purity Control (OPC) Monitor to implement the MEDDAC oxygen program.

6.1.3 Designate, on orders, those individuals authorized to receive and test oxygen. Those individuals authorized to receive and test bulk liquid oxygen may also be used to test oxygen stored in cylinders. NOTE: Only personnel appointed by the commander, and properly trained to test oxygen, will be responsible for monitoring oxygen deliveries.

**6.2** Chief, Clinical Engineering will: Ensure the concentration and amount of oxygen in cylinders are confirmed and documented at the time of delivery to the medical treatment facility.

**6.3** Chief, Clinical Engineering is appointed OPC Monitor with responsibilities outlined below:

**6.3.1** Ensure that all monitoring systems are installed and operating properly.

**6.3.2** Ensure that all personnel assigned to the CEB are trained in the proper use of oxygen analyzers.

**6.3.3** Ensure that all personnel assigned to the CEB are trained in the procedures for testing the Bulk Oxygen System, cylinders and supplier's delivery system.

**6.3.4** Ensure that all personnel assigned to the Family Care Clinic (FCC) are aware of what actions to take in case of quality alarm. Ensure training of FCC personnel in how to respond to quality alarms is performed.

**6.3.5** Ensure that all personnel that perform AOD/NCOD know what action they must take in case of quality alarm.

**6.3.6** Ensure that the bulk oxygen delivery truck is tested from the outlet provided prior to discharge of oxygen into our bulk storage tank.

**6.3.7** Establish and maintain a record of all deliveries of bulk oxygen. Record will be maintained for 2 years.

**6.3.8** Furnish to the commander a list of personnel who are qualified to test bulk oxygen as well as cylinders. Also, ensure that these individuals are appointed in writing by the commander as being authorized to test the oxygen.

**6.3.9** In any case where the central system becomes contaminated, ensures that the complete system is purged and tested before being placed back in service.

**6.3.10** In all cases where the central system has been contaminated, ensures all cylinders are tested before issue or installation on the central system.

**6.3.11** Will be the only individual authorized to allow resumption of use of the central oxygen system.

**6.4** CEB personnel are responsible for the following:

**6.4.1** Testing the Bulk Oxygen System each time a delivery is made. This will consist of testing the oxygen in the delivery truck prior to discharge into our storage tank. Individual will notify the Chief, Clinical Engineering when oxygen concentration is less than 99 percent. When concentration is less than 99 percent, supplier will not be allowed to connect to the bulk tank until approval is received from the Chief, Clinical Engineering. All incidents involving a vendor delivering oxygen below the 99 percent purity level will be recorded and reported to the MEDDAC Quality Improvement Officer and HQ MEDCOM, ATTN: MCLO-MS. The local contracting office will also be advised of the incident. Records of incidents will be retained for a period of 2 years and then destroyed.

**6.4.2** Records on the Medical Gas Receipt Report Form the amount and quality of oxygen delivered. Will sign receipt form after each liquid oxygen delivery.

**6.4.3** Performs preventive maintenance and verification/certification on the oxygen monitor used for testing as well as in-line oxygen pressure/quality monitors, and will affix a DD Form 2163 (Medical Equipment Verification/Certification) on each monitor.

**6.4.4** Checks all compressed gas containers upon receipt for safe physical condition, current hydrostatic test date, color coding, markings, and labels as required by AR 700-68.

**6.4.5** Tests all oxygen cylinders delivered for quality before issuing. Annotates Technician Code, calendar date and percentage of oxygen on DD Form 1191 (Warning Tag for Medical Oxygen Equipment) attached to cylinder.

**6.4.6** Performs required maintenance services on quality monitor and test pressure alarms monthly. A written record of the monthly test will be maintained on file in the Clinical Engineering Branch.

**6.5** The Chief, Department of Anesthesia and Perioperative Services will:

**6.5.1** Ensure that each anesthesia apparatus used is equipped with a continuous oxygen quality monitoring device. The monitoring device will be equipped with an audible alarm.

**6.5.2** Ensure that a written safety policy is developed in accordance with JCAHO standards.

**6.6** Family Care Clinic (FCC) Personnel will:

**6.6.1** Monitor the oxygen purity alarm.

**6.6.2** In the event the quality alarm sounds, take the following action:

**6.6.2.1** Immediately make the following announcement over the health center paging system at least two times:

ATTENTION ALL MEDICAL STAFF: The use of central oxygen will be terminated immediately. All patients requiring oxygen will be transferred to cylinders. The central oxygen system will not be used until further notice.

**6.6.2.2** Inform the FCC Chief Nurse to call the CEB (Clinical Engineering Branch) on call Technician and Chief, Clinical Engineering Branch (3-3712/2836) to report as soon as possible.

**6.6.2.3** Call the PACU and inform the Certified Registered Nurse Anesthetist to immediately terminate use of the Central Oxygen System.

**6.7** AOD:

**6.7.1** Will call the CEB Technician on call when the oxygen quality alarm sounds, informing him to report to the Health Center as soon as possible.

**6.7.2** Will call the Chief, CEB if the quality alarm sounds. Phone number will be located on the CEB Call Roster.

**6.7.3** Will issue emergency oxygen to the ASPU, PACU and Endoscopy on an as needed basis.

**6.8** In the event the Oxygen Quality Alarm sounds, the AOD/NCOD will proceed to the oxygen storage area and turn off both the

18 March 2004

liquid and cylinders supplying the central system. The AOD/NCOD will ensure that any cylinder issued by him/her or any other person is tested prior to issue.

**6.9** The ASPU has oxygen monitors and those individuals assigned in writing by the commander can check for quality prior to issue.

The proponent of this publication is the Chief, Logistics Division. Users are invited to send comments and suggested improvements on DA Form 2028 directly to USA MEDDAC, Logistics Division, ATTN: MCXJ-LO, Fort Huachuca, AZ 85613-7079.
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